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Amdt. Dated Feb. 11, 2004
Reply to Office Action of Oct. 29, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 (Currently Amended). A method of manufacturing a golf ball comprising:
forming a core having a diameter ranging from 1.35 inches to 1.64 inches, and applying at least one boundary layer over the core to create a golf ball precursor product, the boundary layer having a thickness of 0.025 inch to 0.075 inch, the core composed of a polybutadiene material;
heating a the golf ball precursor product such that the golf ball precursor product undergoes volumetric thermal expansion of at least 1.2%; and
applying a cover over the thermally expanded golf ball precursor product, the cover formed by an exothermic reaction.

2-4 (Canceled)

5 (Original). The method according to claim 1 wherein heating the golf ball precursor product comprises convection heating the golf ball precursor product at a temperature within the range of about 120 °F to about 180 °F.

6 (Currently Amended). The method according to claim 5 6 wherein heating the golf ball precursor product comprises convection heating the golf ball precursor product at a temperature within the range of about 140 °F to about 160 °F.

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7 (Original). The method according to claim 1 wherein heating the golf ball precursor product comprises microwave heating the golf ball precursor product for a predetermined time period.

8 (Currently Amended). The method according to claim 1-3 wherein the at least one boundary layer comprises a thermoplastic elastomer.

9 (Currently Amended). The method according to claim 1-3 wherein the at least one boundary layer comprises an ionomer.

10 (Currently Amended). The method according to claim 1 wherein the cover comprises a thermoset material with a resin from the group consisting of Allyl Pthalates like Diallyl Pthalates, (DAP) and Diallyl Iso Pthalates, (DAIP); Aminos; Cyanates; Epoxies; Phenolics; ~~Unsaturated Polyesters~~; Bismaleimides; ~~Polyurethanes~~; Silicones; ~~Urethane Hybrids~~; ~~Vinyl Esters~~; Liquid Nylon and Polydicyclopentadienes.

11 (Original). The method according to claim 5 wherein heating the golf ball precursor product comprises convection heating the golf ball precursor product for about one hour.

12-13 (Canceled)

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14 (Currently Amended). A method of manufacturing a golf ball comprising:

forming a core, the core composed of a polybutadiene material and having a diameter ranging from 1.35 inches to 1.64 inches;

forming at least one boundary layer surrounding the core, the boundary layer having a thickness ranging from 0.025 inch to 0.075 inch;

heating the core and the at least one boundary layer such that the core and the at least one boundary layer undergo volumetric thermal expansion of at least 1.2%;

applying a cover over the thermally expanded core and the at least one boundary layer, and the cover formed by an exothermic reaction.

15 (Original). The method according to claim 14 wherein heating the core and the at least one boundary layer comprises convection heating the core and the at least one boundary layer to a temperature within the range of about 120 °F to about 180 °F.

16 (Original). The method according to claim 15 wherein heating the core and the at least one boundary layer comprises convection heating the core and the at least one boundary layer at temperature within the range of about 140 °F to about 160 °F.

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17 (Original). The method according to claim 15 wherein heating the core and the at least one boundary layer comprises convection heating the core and the at least one boundary layer for about one hour.

18 (Canceled).

19 (Currently Amended). A method of manufacturing a golf ball comprising:

heating a golf ball precursor product such that the golf ball precursor product undergoes volumetric thermal expansion of at least 1.2 %; and

applying a cover over the thermally expanded golf ball precursor product

the cover formed by an exothermic reaction, and

the cover comprised of a thermoset material with a resin from the group

consisting of Allyl Pthalates like Diallyl Pthalates, (DAP) and Diallyl Iso Pthalates, (DAIP); Aminos; Cyanates; Epoxies; Phenolics; ~~Unsaturated Polyesters~~; Bismaleimides; ~~Polyurethanes~~; Silicones; ~~Urethane Hybrids~~; ~~Vinyl Esters~~; Liquid Nylon and Polydicyclopentadienes.

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20 (Withdrawn). A golf ball having reduced susceptibility of cracking of a cover,

the golf ball produced in accordance with the method comprising:

heating a golf ball precursor product at a predetermined temperature and for a predetermined time period to achieve a predetermined volumetric thermal expansion of the golf ball precursor product; and

applying a cover over the thermally expanded golf ball precursor product

21 (Withdrawn). The golf ball according to claim 20 further comprising forming a golf ball precursor product.

22 (Withdrawn). The golf ball according to claim 20 wherein heating the golf ball precursor product to a predetermined temperature comprises convection heating the golf ball precursor product to a temperature within the range of about 120 °F to about 180 °F.

23 (Withdrawn). The golf ball according to claim 21 wherein heating the golf ball precursor product to a predetermined temperature comprises convection heating the golf ball precursor product to a temperature within the range of about 140 °F to about 160 °F.

24 (Withdrawn). The golf ball according to claim 21 wherein forming a golf ball precursor product comprises forming a core and applying at least one boundary layer over the core.

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25 (Withdrawn). The golf ball according to claim 24 wherein heating the golf ball precursor product to a predetermined temperature comprises microwave heating the golf ball precursor product.

26 (Withdrawn). The golf ball according to claim 24 wherein the at least one boundary layer is a thermoplastic elastomer.

27 (Withdrawn). The golf ball according to claim 26 wherein the thermoplastic elastomer is an ionomer.

28 (Withdrawn). The golf ball according to claim 20 wherein the cover is formed from a thermoset material.

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29 (Withdrawn). A golf ball having reduced susceptibility of cracking of a cover,

the golf ball produced in accordance with the method comprising:

heating a golf ball precursor product at a predetermined temperature and for a predetermined time period to achieve a predetermined volumetric thermal expansion of the golf ball precursor product; and

applying a cover over the thermally expanded golf ball precursor product

the cover comprised of a thermoset material with a resin from the group

consisting of Allyl Pthalates like Diallyl Pthalates (DAP) and Diallyl Iso Pthalates (DAIP); Aminos; Cyanates; Epoxies; Phenolics; Unsaturated Polyesters; Bismaleimides; Polyurethanes; Silicones; Urethane Hybrids; Vinyl Esters; Liquid Nylon and Polydicyclopentadienes.